

Alton Coal Development, LLC

463 North 100 West, Suite 1

Cedar City, Utah 84720

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Incoming
C0250005

#4148

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July 10, 2012

Daron R. Haddock
Coal Program Manager
Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

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JUL 11 2012

DIV. OF OIL, GAS & MINING

Subject: **Revisions to Reclamation Seed Mixes, Coal Hollow Project, Kane County, Utah,
C/025/0005**

Dear Mr. Haddock,

Alton Coal Development, LLC is providing this submittal to correct inappropriate planting rates for some of the plant species (I assume to have been misplacement of the decimal) and to add Sterile Triticale. Sterile Triticale is plant species that establishes itself quickly allowing time for perennial plant establishment.

Please find enclosed 4 (four) clean copies of the revisions to the MRP. Please do not hesitate to contact me if you have any questions.

Sincerely

B. Kirk Nicholes
Environmental Specialist

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: Alton Coal Development, LLC

Mine: Coal Hollow

Permit Number: C/025/0005

Title: Revisions to Chapter 3 Reclamation Seed Mixes

Description, Include reason for application and timing required to implement:

Reclamation seed mixes have been changed to more appropriate rates with the addition of Sterial Triticale

Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- ☐ Yes ☒ No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ ☐ increase ☐ decrease.
- ☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO# _____
- ☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- ☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?
- ☐ Yes ☒ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- ☐ Yes ☒ No 6. Does the application require or include public notice publication?
- ☐ Yes ☒ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- ☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- ☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # _____
- ☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?
- Explain: _____
- ☐ Yes ☒ No 11. Does the application affect the surface landowner or change the post mining land use?
- ☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- ☐ Yes ☒ No 13. Does the application require or include collection and reporting of any baseline information?
- ☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- ☐ Yes ☒ No 15. Does the application require or include soil removal, storage or placement?
- ☐ Yes ☒ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- ☐ Yes ☒ No 17. Does the application require or include construction, modification, or removal of surface facilities?
- ☐ Yes ☒ No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- ☐ Yes ☒ No 19. Does the application require or include certified designs, maps or calculation?
- ☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?
- ☐ Yes ☒ No 21. Have reclamation costs for bonding been provided?
- ☐ Yes ☒ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- ☐ Yes ☒ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

B. Kirk Nicholas
Print Name

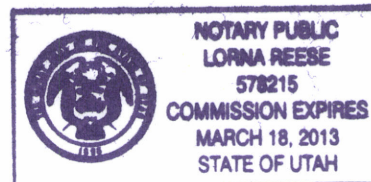
B. Kirk Nicholas Resident Agent 7/10/12
Sign Name, Position, Date

Subscribed and sworn to before me this 10 day of July, 2012

Lorna Reese
Notary Public

My commission Expires: 3-18, 2013

Attest: State of Utah } ss:
County of Garfield



For Office Use Only:

Assigned Tracking
Number:

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APPLICATION FOR COAL PERMIT PROCESSING

Detailed Schedule Of Changes to the Mining And Reclamation Plan

Permittee: Alton Coal Development, LLC

Mine: Coal Hollow

Permit Number: C/025/0005

Title: Revisions to Chapter 3 Reclamation Seed Mixes

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED

[illegible]

Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.

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340. RECLAMATION PLAN

341. REVEGETATION

This document contains the revegetation plan for final reclamation of all lands disturbed by coal mining and reclamation operations, except water areas and the surface of roads approved as part of the postmining land use, as required in R645-301-353 *through* R645-301-357. It also shows how the Coal Hollow Project will comply with the biological protection performance standards of the State Program.

341.100. Reclamation Timetable

A detailed schedule and timetable for the completion of each major step in the mine plan has been included in Chapter 5 of the MRP. Briefly, the mine will conduct operations in one area (segment) at a time. No more than 40 acres will be disturbed at one time for mining. Once mined, the plan includes redistributing subsoil and topsoil followed by seeding this segment with the final seed mix contemporaneously, or at the same time the mining of the next segment begins. However, seeding will be accomplished only in appropriate periods (usually late-fall, but early-spring could also be an option). The mine plan has been engineered to disturb the smallest practicable area at any one time. With prompt establishment and maintenance of vegetation, immediate stabilization of disturbed areas will minimize surface erosion. Details of the plan has been included in Chapter 5 of this document.

341.200. Reclamation Description

The Coal Hollow Project will be reclaimed and revegetated to meet the appropriate postmining land use. Most areas will be reclaimed to the native plant communities that existed prior to mining conditions. Other areas will be reclaimed to enhance habitat for sage-grouse or other wildlife species. Finally, in those areas where the landowner requests a change in the plant community to increase productivity for domestic livestock, they will be reclaimed accordingly.

341.210. Seed Mixtures

Revegetation seed mixtures for each plant community disturbed by mining activities in the Coal Hollow Project area are given in this section. Table 3-36 shows the plant communities that may eventually be disturbed by mining operations at the Coal Hollow Project area.

Table 3-36: Vegetation Communities of the Coal Hollow Permit Area Proposed for Disturbance	
MAP SYMBOL (see <i>Vegetation Map</i> , Drawing 3-1)	PLANT COMMUNITY
S/G	Sagebrush/Grass
P	Pasture Land
P-J	Pinyon-Juniper
M	Meadow
OB	Oak Brush
RB/SB	Rabbitbrush/Sagebrush (Disturbed; previous/ Sagebrush/Grass)

Seed mixtures for each disturbance type are shown on Tables 3-37 *through* 3-42. These rates have been based on drill seeding methods described in this document. When broadcast seeding is employed these rates will be doubled.

Table 3-37: Revegetation Seed Mixture for the Sagebrush/Grass Community at the Coal Hollow Project

	Rate** (# PLS/Ac)	Seeds/ft2
SHRUBS		
<i>Artemisia nova</i> *	0.20	4.16
<i>Artemisia tridentata</i> *	0.10	5.74
<i>Ceratoides lanata</i>	1.00	1.26
<i>Purshia tridentata</i>	2.00	0.69
<i>Symphoricarpos oreophilus</i>	1.00	1.72
FORBS***		
<i>Achillea millefolium</i>	0.03	1.91
<i>Hedysarum boreale</i>	1.00	0.77
<i>Linum lewisii</i>	0.70	4.47
<i>Lupinus argenteus</i>	1.00	0.29
<i>Penstemon palmeri</i>	0.30	4.20
<i>Sphaeralcea grossulariifolia</i>	0.40	4.59
<i>Viguiera multiflora</i>	0.20	4.84
GRASSES		
<i>Elymus smithii</i>	1.50	4.34
<i>Elymus trachycaulus</i>	1.50	5.51
<i>Poa pratensis</i>	0.10	5.00
<i>Poa secunda</i>	0.20	4.25
<i>Stipa hymenoides</i>	1.00	4.32
Sterile Triticale - Quick Guard	10.00	4.59
TOTALS	22.23	62.66

* This species could also to be planted by containerized seedlings at a rate of 200 plants per acre to enhance sage-grouse habitat.

** Based on drill seeding methods. The number reflects the pounds of pure live seed (PLS) per acre.

*** Seeds used may be based on commercial availability. Other forb species that would be beneficial for sage-grouse enhancement include: *Achillea millefolium*, *Agoseris glauca*, *Crepis acuminata*, *Gayophytum* spp., *Lomatium* spp., *Tragopogon dubius*, *Trifolium* spp.

Table 3-38: Revegetation Seed Mixture for the Pasture Lands at the Coal Hollow Project

(Final determination to be made by landowners)	Rate* (# PLS/Ac)	Seeds/ft2
SHRUBS		
FORBS **		
<i>Achillea millefolium var. occidentalis</i>	0.04	2.55
<i>Astragalus cicer</i>	1.5	4.22
<i>Hedysarum boreale</i>	1	0.77
<i>Linum perenne</i>	1	6.39
<i>Medicago sativa</i>	1	5.21
GRASSES		
<i>Bromus inermis</i>	1	2.45
<i>Dactylis glomerata</i>	0.2	0.00
<i>Pascopyrum smithii</i>	1.5	4.34
<i>Elymus lanceolatus ssp. lanceolatus</i>	1.5	5.27
<i>Psathyrostachys juncea</i>	1	0.00
<i>Thinopyrum intermedium</i>	2	0.00
<i>Phleum pratense</i>	0.2	0.00
<i>Poa pratensis</i>	0.1	5.00
Sterile Triticale - Quick Guard	10.00	4.59
TOTALS	22.04	40.78

* Based on drill seeding methods. The number reflects the pounds of pure live seed (PLS) per acre.

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*** Seeds used may be based on commercial availability. Other forb species that would be beneficial for sage-grouse enhancement include: *Achillea millefolium*, *Agoseris glauca*, *Crepis acuminata*, *Gayophytum* spp., *Lomatium* spp., *Tragopogon dubius*, *Trifolium* spp.

Table 3-39: Revegetation Seed Mixture for the Pinyon-Juniper Community at the Coal Hollow Project

	Rate** (# PLS/Ac)	Seeds/ft2
SHRUBS		
<i>Amelanchier Utahensis</i>	5.00	2.96
<i>Artemisia nova</i>	0.20	4.16
<i>Artemisia tridentata vaseyana</i>	0.07	4.02
<i>Ceratoides lanata</i>	3.00	3.79
<i>Purshia tridentata</i>	12.00	4.13
<i>Symphoricarpos oreophilus</i>	2.50	4.30
FORBS		
<i>Artemisia ludoviciana</i>	0.04	4.13
<i>Eriogonum umbellatum</i>	1.00	4.80
<i>Hedysarum boreale</i>	5.00	3.86
<i>Lupinus argenteus</i>	15.00	4.30
<i>Sphaeralcea coccinea</i>	0.50	5.74
<i>Viguiera multiflora</i>	0.20	4.84
GRASSES		
<i>Elymus spicatus</i>	1.00	3.21
<i>Elymus smithii</i>	1.50	4.34
<i>Elymus trachycaulus</i>	1.50	5.51
<i>Poa pratensis</i>	0.10	5.00
<i>Poa secunda</i>	0.20	4.25
<i>Stipa hymenoides</i>	1.00	4.32
Sterile Triticale - Quick Guard	10.00	4.59
TOTALS	59.81	82.25

* Based on drill seeding methods. The number reflects the pounds of pure live seed (PLS) per acre.

Table 3-40: Revegetation Seed Mixture for the Meadow Community at the Coal Hollow Project

	Rate* (# PLS/Ac)	Seeds/ft2
SHRUBS		
FORBS **		
<i>Iris missouriensis</i>	2	0.96
<i>Achillea millefolium</i> var. <i>occidentalis</i>	0.1	6.37
GRASSES		
<i>Carex microptera</i>	0.2	3.89
<i>Carex nebrascensis</i>	0.5	6.13
<i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i>	2	7.35
<i>Phleum pretense</i>	0.2	5.97
<i>Poa pratensis</i>	0.1	5.00
<i>Poa secunda</i> ssp. <i>sandbergii</i>	0.3	6.38
<i>Schoenoplectus americanus</i>	1	4.13
<i>Sporobolus airoides</i>	0.2	8.03
Sterile Triticale - Quick Guard	10.00	4.59
TOTALS	16.60	58.79

* Based on drill seeding methods. The number reflects the pounds of pure live seed (PLS) per acre.

*** Seeds used may be based on commercial availability. Other forb species that would be beneficial for sage-grouse enhancement include: *Achillea millefolium*, *Agoseris glauca*, *Crepis acuminata*, *Gayophytum* spp., *Lomatium* spp., *Tragopogon dubius*, *Trifolium* spp.

Table 3-41: Revegetation Seed Mixture for the Oak Brush Community at the Coal Hollow Project

	Rate* (# PLS/Ac)	Seeds/ft2
SHRUBS		
<i>Amelanchier utahensis</i>	1	0.59
<i>Artemisia nova</i>	0.2	4.16
<i>Artemisia tridentate ssp. vaseyana</i>	0.07	4.02
<i>Cercocarpus montanus</i>	1	1.35
<i>Purshia tridentate</i>	2	0.69
<i>Symphoricarpos oreophilus</i>	1	1.72
<i>Ephedra viridis</i>	2	1.15
FORBS		
<i>Artemisia ludoviciana</i>	0.04	4.13
<i>Sphaeralcea coccine</i>	0.2	2.30
<i>Hedysarum boreale</i>	1	0.77
<i>Heliomeris multiflora</i>	0.2	4.84
GRASSES		
<i>Bromus marginatus</i>	2	4.90
<i>Pseudoroegneria spicata ssp. spicata</i>	1.5	4.82
<i>Elymus trachycaulus ssp. trachycaulus</i>	1.5	3.96
<i>Poa pratensis</i>	0.1	5.00
<i>Poa secunda ssp. sandbergii</i>	0.2	4.25
<i>Achnatherum hymenoides</i>	1	4.32
Sterile Triticale - Quick Guard	10.00	4.59
TOTALS	25.01	57.56

* Based on drill seeding methods. The number reflects the pounds of pure live seed (PLS) per acre.

Table 3-42: Revegetation Seed Mixture for the Rabbitbrush/Sagebrush Community (disturbed Sagebrush/Grass Community) at the Coal Hollow Project

	Rate** (# PLS/Ac)	Seeds/ft2
SHRUBS		
<i>Artemisia nova</i> *	0.2	4.16
<i>Artemisia tridentate</i> ssp. <i>Tridentate</i> *	0.1	5.74
<i>Krascheninnikovia lanata</i>	1	1.26
<i>Purshia tridentate</i>	2	0.69
<i>Symphoricarpos oreophilus</i>	1	1.72
FORBS ***		
<i>Achillea millefolium</i> var. <i>occidentalis</i>	0.03	1.91
<i>Hedysarum boreale</i>	1	0.77
<i>Linum perenne</i>	0.7	4.47
<i>Lupinus argenteus</i> ssp. <i>rubricaulis</i>	1	0.29
<i>Penstemon palmeri</i>	0.3	4.20
<i>Sphaeralcea grossulariifolia</i>	0.4	4.59
<i>Heliomeris multiflora</i>	0.2	4.84
GRASSES		
<i>Pascopyrum smithii</i>	1.5	4.34
<i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i>	1.5	5.51
<i>Poa pratensis</i>	0.1	5.00
<i>Poa secunda</i> ssp. <i>sandbergii</i>	0.2	4.25
<i>Achnatherum hymenoides</i>	1	4.32
Sterile Triticale - Quick Guard	10.00	4.59
TOTALS	22.23	62.66

* This species could also to be planted by containerized seedlings at a rate of 200 plants per acre to enhance sage-grouse habitat.

** Based on drill seeding methods. The number reflects the pounds of pure live seed (PLS) per acre.

*** Seeds used may be based on commercial availability. Other forb species that would be beneficial for sage-grouse enhancement include: *Achillea millefolium*, *Agoseris glauca*, *Crepis acuminata*, *Gayophytum* spp., *Lomatium* spp., *Tragopogon dubius*, *Trifolium* spp.

341.230. Mulching Techniques

Mulch will be placed on the seedbed surface once soil amendments have been incorporated and seeding has been accomplished. Mulching will occur by one of the following methods:

- Certified noxious weed free straw applied at a rate of 1 ton/acre anchored by crimping or a chemical binder.
- Wood fiber hydromulch at a rate of $\frac{3}{4}$ ton per acre for slopes flatter than 3:1 and 1 ton per acre for slopes at 3:1 which is the steepest slope planned at the project. This hydromulch would be anchored with a chemical binder at the manufacturer's suggested rate.

The mulch should control erosion by wind and water, decrease evaporation and seed predation, and increase survivability of the seeded species. Since there is only one post mining land use, mulching will follow one of the above described methods for all reclaim areas.

341.240. Irrigation

Irrigation has not been planned for the reclaimed area with the exception of watering the containerized plants as mentioned above.

341.250. Revegetation Monitoring

Vegetation of the reclaimed areas will be monitored regularly to measure the success of plant establishment and to determine if problem areas exist. Qualitative and quantitative data will be recorded at regular intervals. The qualitative data will include: site location, sample date, observers, slope, exposure, acreage, animal disturbance, erosion damage, dominant plant species observed, and other pertinent notes. Quantitative data recorded will include: total cover (living cover, rock, litter, bare ground), cover by species, composition, frequency, and woody species density.

Methods for quantitative monitoring will be as follows. Transect lines will be placed randomly on each of the revegetation sites. Random sample locations will then be placed from these transect lines and the aforementioned data will be recorded. Ocular methods with square meter quadrat will be used to provide cover and frequency data, whereas, point quarter and/or belt transects will be used to estimate woody species densities.

Weed control through chemical means will follow the current Weed Control Handbook (published annually or biannually by the Utah State University Cooperative Extension Service) and herbicide labels.

Weed surveys will also be conducted on the reclaimed areas on a yearly basis or during the revegetation monitoring studies. If undesirable, exotic or "weedy" plant species are present at a density that they could impede revegetation or out-compete desirable plant species, a certified or trained specialist will spray herbicide, kill or remove the weeds mechanically (roguing, grubbing and mowing).

341.300. Mining, Reclamation & Revegetation Research

Mining, reclamation & revegetation research has been planned and is in the process of being submitted to DOGM. Additionally, DOGM may require greenhouse studies, field trials, or equivalent methods of testing proposed or potential revegetation materials and methods to demonstrate that revegetation is feasible pursuant to R645-300-133.710.